

REMARKS**Status of the Claims**

Claims 1 and 3-10 are currently present in the Application, and claim 1 is an independent claim. Claim 1 has been amended, claims 11, 13-21, and 23-20 have been canceled, and no claims have been added in this response.

Applicants are not conceding that the subject matter encompassed by claims 1-20, prior to this and previous amendments, are not patentable over the art cited by the Examiner. Claim 1 was amended and claims 11, 13-21, and 23-20 were canceled in this Amendment solely to facilitate expeditious prosecution of this Application. Applicants respectfully reserve the right to pursue claims, including the subject matter encompassed by claims 1-20 as presented prior to this and previous amendments, and additional claims in one or more continuing applications.

Claim Rejections - 35 U.S.C. § 112

Claims 1, 11, and 21 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Claims 11 and 21 have been canceled in this response and, therefore, rejections to these claims are moot. Applicants have amended independent claim 1 in this response and request the removal of the 112 rejection to claim 1 in the next Office communication.

Claim Rejections - Alleged Anticipation Under 35 U.S.C. § 103

Claims 1, 3-11, 13-21, and 23-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCrory (U.S. Patent No. 6,513,057, hereinafter "McCrory") in view of Correnti, et al. (U.S. Patent No. 5,394,547, hereinafter "Correnti"). Applicants respectfully traverse these rejections. Claims 11, 13-21, and 23-30 have been canceled in this response and, therefore, rejections to these claims are moot.

Applicants have amended independent claim 1 to include limitations that 1) an application utilizes two different schedulers to schedule tasks on dissimilar processors; and 2) tasks scheduled by the two schedulers execute concurrently. Support for such

amendments may be found in Applicants' Figure 46 (both task 4625 and task 4665 are executing concurrently) and in Applicants' specification on page 46, line 20 through page 47, line 20; and page 52, line 24 through page 53, line 23. Therefore, no new matter is added with such amendment. As amended, claim 1 is a method claim for asymmetrically multithreading tasks in a computer environment that includes a plurality of dissimilar processors with limitations comprising:

- retrieving an application;
- determining that the application requires both a first scheduler and a second scheduler, wherein the first scheduler is different than the second scheduler;
- scheduling, during execution of the application, a plurality of first tasks adapted to be executed by a first type of processor from the plurality of dissimilar processors, the scheduling performed by the first scheduler that maintains a first run queue that includes data corresponding to the first tasks;
- in response to the scheduling of the plurality of first tasks by the first scheduler, inserting the plurality of first tasks in the first run queue;
- scheduling, during the execution of the application, a plurality of second tasks adapted to be executed by a second type of processor from the plurality of dissimilar processors, the scheduling performed by the second scheduler that maintains a second run queue that includes data corresponding to the second tasks, wherein the first scheduler and the second scheduler are both utilized by the application during the application execution, and wherein the first task and the second task execute concurrently;
- in response to the scheduling of the plurality of second tasks by the second scheduler, inserting the plurality of second tasks in the second run queue; and
- wherein the first scheduler and the second scheduler are both located on a first processor that is the first type of processor.

Applicants' application utilizes two different schedulers, which both reside on a first processor, to schedule tasks for two different processor types. These two different schedulers are both operational during an application's execution. In contrast, McCrory

teaches that a **single operating system** is solely responsible for scheduling tasks. McCrory states:

“**An operating system**, preferably stored in memory 332, is provided for scheduling tasks on processors 318, 320, 334, and 336. The operating system is responsible for scheduling the execution of process threads on the system processors 318, 320, 334, and 336.” (col. 7, lines 26-29, emphasis added)

“For each new thread created, **the HSMP OS determines the initial processor family to associate with that thread** based on the binary code stream that the thread will begin executing.” (col. 8, lines 12-14, emphasis added)

As can be seen from the above excerpts, McCrory only teaches the use of a single operating system to schedule tasks. Furthermore, the Office Action states “McCrory also differs from the claimed invention by not explicitly teaching that the second scheduler is different from the first scheduler” (Final Office Action mailed April 9, 2008, page 5, item 12). The Office Action is correct in this statement because, as shown in the above excerpt, McCrory only teaches **one and only one** scheduler.

Regarding Correnti, Correnti teaches a method of selecting **a single scheduler** from a plurality of schedulers at boot-up. In turn, Correnti proceeds to utilize the **single scheduler** during an application’s execution. Correnti states:

“An operating system kernel is provided having a standardized interface for permitting the installation of a **selected one** of multiple diverse schedulers for use in different environments. System resources which may include memory, input/output devices and file systems are thereafter optimally allocated for a selected set of applications and a particular environment within the data processing system by permitting a user to install a **selected one** of the multiple schedulers which directly controls allocation of processor time, thereby indirectly allocating system resources.” (col. 2, lines 30-40, emphasis added)

As can be seen from the above excerpt, Correnti selects one, and only one, scheduler to support a computer system. Therefore, since both McCrory and Correnti teach the utilization of only one scheduler, neither McCrory nor Correnti teach or suggest, either alone or in combination with each other “*determining that the application*

requires both a first scheduler and a second scheduler, wherein the first scheduler is different than the second scheduler; scheduling, during execution of the application, a plurality of first tasks ... the scheduling performed by the first scheduler...; scheduling, during the execution of the application, a plurality of second tasks ..., the scheduling performed by the second scheduler” as claimed by Applicants.

In addition, since both the first scheduler and the second scheduler are operational during the application's execution, tasks scheduled by both schedulers may execute concurrently. As discussed above, since neither McCrory nor Correnti teach or suggest two schedulers scheduling tasks during application execution, neither McCrory nor Correnti could teach or suggest, either alone or in combination with each other “*wherein the first task and the second task execute concurrently*” as claimed by Applicants.

Therefore, since neither McCrory nor Correnti teach or suggest, either alone or in combination with each other, all the limitations included in Applicants' claim 1 as amended, claim 1 is allowable over McCrory in view of Correnti. Each of claims 3-10 are dependent, either directly or indirectly, upon independent claim 1. Therefore, each of claims 3-10 are allowable for at least the same reasons that independent claim 1 is allowable as discussed above.

Conclusion

As a result of the foregoing, it is asserted by Applicants that the remaining claims in the Application are in condition for allowance, and Applicants respectfully request an early allowance of such claims.

Applicants respectfully request that the Examiner contact the Applicants' attorney listed below if the Examiner believes that such a discussion would be helpful in resolving any remaining questions or issues related to this Application.

Respectfully submitted,

By /Leslie A. Van Leeuwen, Reg. No. 42,196/

Leslie A. Van Leeuwen, Reg. No. 42,196

Van Leeuwen & Van Leeuwen

Attorney for Applicant

Telephone: (512) 301-6738

Facsimile: (512) 301-6742